

# ANALYSIS OF HETEROGENEITIES IN THE UNIT COST OF UNIVERSITY EDUCATION IN NIGERIA

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## Abstract

This study analyzed the heterogeneities in the unit cost of university education in Nigeria. As a descriptive research design, it made use of 2,300 undergraduates who cut across eight faculties in each of the six sampled universities through stratified random sampling techniques. Three research questions were raised and analyzed in the study. Data were collected through the use of self developed instruments titled, University Education Social Unit Cost Questionnaire (UESUCQ) this instrument was meant to collect secondary data on sources universities funds and expenditure and valid from the appropriated and audited accounts of the universities. The second instrument is named University Education Private Unit Cost Questionnaire. (UEPUCQ) used for collecting primary data from the students concerned validated and with reliability coefficient of  $r = 0.92$ . Data were analyzed through descriptive statistics tools. The study found that from 2007 to 2012, followed the same trend with that of the crude cost with the highest S U C of ₦3,816,191.23 from Obafemi Awolowo University (male) and ₦3,817,803.19 (female). The average reveals that the males took the highest social cost of ₦5,253,835,276 and S U C of ₦1,629,780.60 as against ₦1,624,483.76 by the female.

Also, average Social Unit Cost across faculties reveal that Faculty of Medicine had the highest (₦2,589,335.30) followed by Engineering with ₦2,589,114.40. But the least Social Unit Cost was recorded in the faculty of Law (₦2,431,694.41). A cursory look at the findings of the study reveals that both Private Unit Cost and Social Unit Cost of undergraduate vary from one university to the other, whether State or Federal and among disciplines. It also varies among gender. In the area of wastages, difference also existed between Federal and State Universities in terms of cost. On direct Social

Unit Cost, a significant difference existed between the adjusted direct Social Unit Cost among State and Federal universities in South –West Nigeria from 2007 to 2012. The result provides enough evidence for recommendation that there is a need for educating more Female students as the Social Unit Cost was high in most of the universities sampled. Also, there should be an assessment of the cost-benefit analysis of university undergraduate education and thus encourage government at both state and federal to divert the hard-earned resources on fields/courses that are of greater benefits to both individuals and the society at large.

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**Keywords:** Crude Cost, adjusted cost, private cost, social cost, cost differentials, school effectiveness, education tax fund

## Introduction

The Nigerian higher education system, in spite of being Africa's largest higher education system with nearly 400,000 students, is unable to admit all qualified applicants every year (Ajayi and Alani, 1996) and Association for the Development of Education in Africa (ADEA), 2000). In the last five years, more than 4 million qualified candidates failed to secure admission to Nigerian universities. Contrary to popular public opinion that universities overstretched their admission capacities, many federal universities admitted fewer students than they ought to in the 2010/2011 admission exercise. Daily Trust investigation revealed that several universities did not fill their carrying capacity as set by the National Universities Commission (NUC, 2009).

According to the report on the conduct of the 2010/2011 admission to tertiary institutions compiled by the Joint Admissions and Matriculation Board (JAMB) in 2012, some top universities with the most applicants eventually admitted even as less students than recommended. For example, in 2010/2011 academic session, Ahmadu Bello University which has a carrying capacity of 6,080 students could only admit 3,612 students though 89,760 students applied for admission there. Obafemi Awolowo University (OAU) eventually admitted 4,843 students against its carrying capacity of 5978 students in the 2010/2011 academic session, even though 70,933 students applied for admission into the school. Out of 88,176 students that applied for admission into the University of Nigeria Nsukka, only 5,400 were admitted which was 578 students short of its carrying capacity.

Bayero University Kano (BUK) has a carrying capacity 5,682 students but only 4,695 students gained admission though 40,848 students applied for admission into the university. Other federal universities that admitted fewer students than their carrying capacities during 2010/2011 academic session include University of Ilorin, University of Jos,

University of Calabar, University of Port Harcourt, University of Maiduguri, Federal University of Technology Akure, University of Abuja and University of Uyo among others. Only a few exceeded their carrying capacities by a small margin like University of Lagos, University of Benin, Federal University of Technology, Owerri, and University of Agriculture, Markurdi.

*Numerusclausus* is applied in admission to some disciplines determined by the National Universities Commission (NUC) and conditioned by the availability of instructional facilities at the level of institution (International Association of Universities, 2000). Three parallel strategies are being pursued in order to expand access to higher education in Nigeria. First, distance higher education programmes are being established; second, good quality private universities are being encouraged and third, plans are in the works to expand all university campus enrolments to a maximum of 30,000 students (ADEA, 2000).

According to National Universities Commission (NUC) ; 2009), the number of females in the university in Nigeria as at 2008/2009 academic session has risen to about 47%. The Joint Admissions and Matriculation Board (2009) reported that the number of applicants to the nation's universities rose from 348,619 to 514,616 in 2009. Statistics obtained from the academic unit of some universities in Nigeria shows that in University of Lagos, out of 11,713 students in the institution during 1986/87 session, only 3,359 were females. The number of females rose to 17,920 leaving the male with the remaining 20,909 during the 2008/2009 session.

The situation at the University of Ibadan is also similar. The university had 3,230 females students out of its 8,770 student population in 1986/87 session. In its 2007/2008 academic session, the University had 7,456 females as against 11,387 male students. More than half of the over 30,000 students at the University of Nigerian Nsukka were females. Findings at the University of Maiduguri, Ahmadu Bello University Zaria, Kaduna State and the University of Ilorin revealed that males were still dominating females in enrolment. Universities in South East geo – political Zone of the country had almost a 50 – 50% of male to female enrolment figure (Olugbile, 2010).

The Federal Government controls universities and other higher educational institutions through the following organs: the Federal Ministry of Education; the National Universities Commission, which among other things allocate funds to federal universities and also prescribe the spending formula, and the Committee of Vice Chancellors of Nigerian Federal Universities, which acts as a coordinating body offers advice to government and universities governing councils on matters of general and specific concern to higher education. Each university is administered by a Council and a Senate, and is headed by an appointed Vice Chancellor as the Chief Executive

Officer (CEO). Within universities and colleges, the institutes and centres are more autonomous.

Other sources of finance to higher education in Nigeria include endowments, fees/levies, gifts, and international aid from international organizations. For example, the World Bank has financed a US\$ 120 million project titled: Federal Universities Development Sector Operation (Odebiyi and Aina 1999) and (Babalola, Sikwibele, and Suleiman, 2000).

Over the past two decades across countries and regions serious questions have been raised about performance in the public education sector. In the United States, growing reluctance on the part of taxpayers at the local level to pay increasing taxes has become pervasive. School district expenditure, its mode of funding, and social equity effects on educational outcomes have all been the subject of numerous studies.

### **Studies on Cost of Education**

As a result of its important nature, cost received significant attention from scholars across discipline. It has attracted the attention of researchers in economics of education, functional planning and business. Most studies on cost of schooling and enrollment use proxies for education costs such as free education policy (Deininger, 2003), community level prices of schooling (Glick and Sahn, 2006) and public cost – related concept and education in developing and developed nations of the world which will be reviewed.

Researchers on cost, such as Akinyemi (2005), Oyetakin (2008) and Ofem (2011) have shown variously that, teachers' salaries is one the major determinants of education cost. This is connected with the fact that education is highly labour intensive. In some developing countries, teachers' salary accounted for over 90 percent of total current expenditure in primary and secondary schools (Either, 1984). According to him in Ethiopia, the average primary school teacher's salary to GNP is much higher. These findings indicate that teachers' pay scales are likely to exert a strong influence on the level of total expenditure on Education. Stressing the importance of teachers' salaries, any attempt to reduce education costs is bound to focus on teachers' salaries initially, since they represent at least 70 percent of the total current cost of education in many developing countries. This will invariably affect teacher's performance, and school effectiveness (Oyetakin, 2011).

Akpotu's study though, similar to the study in the area of cost of education, looked at trend of social cost of education; it is different in focus, because this research deals with private cost of education as it affects effectiveness of secondary education in Ondo State. Earlier research works by Akpotu (2008) revealed that there are variations in cost of education across and within various countries of the world. Comparisons between costs of education in developed countries during the 1990s reveal some striking

differences. Akpotu (2008) established that the average cost per student in higher education in developed countries was 55 percent of GNP per capital in the early 1990s, whereas developing countries on the average spent five times the level of GNP per capital and many African parents spent more than ten times the average per capital income on each student.

Hazans (2008) pointed out that the cost of education, regardless of the country bearing it, normally has two major attributes which are consumption and investment. He argued further that since education is such an integrated process, it is difficult to segregate any aspect as the consumption components of education cost or any as investment. The popular notion that the expenditure incurred on technical education is an investment and that on general education is consumption has no validity. He concluded that cost of education has three different aspects. Viz: institutional cost, student cost and opportunity cost. The cost of education, whatever the aspect under consideration, could vary with the scope; the wider the scope, the greater the estimate. Despite the variation, ambiguity and scientific classification of cost of education, it seems impossible to obtain an accurate measure of total cost which includes a multitude of odd items starting from current to estimates of opportunity and non – monetary cost.

In term of real costs of education, per student, the trend has probably been that of upward swing in most countries of the world. For example, apart from meeting the cost of feeding, transportation, stationeries and textbooks, parents in Ondo State paid on average N1,700.00 for secondary school levies excluding boarding fees and feeding in spite of the government free education policy in 2006 – 2009 sessions. Aina, Oyetakin and Oshun (2010) submitted that the cost of educating university students in Nigeria varies as a result of gender, price of commodities and university location.

With this number of Universities and the students' enrolment, its University system support numerous graduate programmes and serve as a magnet for students from neighboring countries. The system embraces much of the country's research capacity and produces most of its skilled professionals. Surveying this system and its institutional arrangements well over a decade ago, the World Bank concluded that 'more than any other country in Sub-Saharan Africa, the structure exist in Nigeria that could provide for a rational and effective development of University education' (World Bank, 2002).

Hinchliffe (2002) estimates that education expenditure is equal to only 2.4% of GDP and 14.3% of government expenditure. The share of these funds going to primary education has dropped to 35% and secondary education's portion has remained relatively unchanged at 29%, but tertiary education's share has nearly doubled to 35%. The Education Tax Fund is financed by a 2% levy on pre – tax earnings of firms with more than 100

employees; half of these funds are earmarked for higher education. Nigeria's recent allocation shares for education diverge sharply from regional and international norms.

### **Statement of the problem**

The evaluation of education cost differentials across school districts has been an important topic in education finance research for decades (Fowler and Monk, 2008). Interest in this topic has grown in recent years with the emergence of adequacy as the primary standard in school finance litigation as well as the growth of state accountability systems that focus on student performance. Each of these developments calls for attention to the fact that some regions must spend more than others to obtain the same performance, that is, to education cost differentials among regions.

The South-West Nigeria Universities see to operate in a single economy where cost differentials are perceived to occur. Also, the rising cost of training undergraduates in Nigeria universities amidst population explosion of students without a corresponding increase in government allocation constitute a problem of cost and standard to be met.

Secondly, the relevance of higher education with respect to cost-per-student or per - degree granted, or per - unit of learning, or per - any other reasonable unit of higher education's output also constitute a problem of cost and standard to be met. This issue deals with efficiency and productivity of institutions, in contrast to the preceding issue that dealt more with the total resources that a nation devotes to its higher educational enterprise. The unit costs of higher education seem elusive because of the multiple and hard – to-measure outputs.

### **Purpose of the Study**

The purpose of this study was to:-

- (i) To analyse the unit cost of South-West Nigeria University Education and examine the disbursement of the unit budgetary allocation to Universities in South-West Nigeria;
- (ii) To explore various unit cost of university education in the Southwest geo- political zone in order to ascertain whether cost differs with references to variables such as income, demand for higher education, population, and level of development;

### **Research Questions**

The following research questions were tested with regards to this research work:

- (1) Was there any difference between the Social Unit Cost of educating the male and female undergraduates at the public universities in

Southwest Nigeria from 2007 to 2012?

- (2) Was there any difference in the Private Unit Cost of areas of specialization/discipline among the undergraduates in public universities in South-West Nigeria from 2007 to 2012?
- (3) Was there any difference among the Social Unit Costs of areas of specialization/disciplines at the public university level in South west Nigeria from 2007 to 2012?

## **Methodology**

### **Research Design**

This study adopted the descriptive research design. This is because the study analysed the unit cost of university education in Southwest Nigeria from 2007 to 2012 using a set of questionnaires as a source of collection of primary data and secondary data from the Federal and State universities sampled. In essence, the descriptive survey research design was adopted because it is primarily concerned with the collection of data for the purpose of describing and interpreting existing conditions, attitudes, prevailing practices and beliefs.

### **The Study Population**

The population of this research work consisted of all undergraduate students in public Universities, that is, Federal and State owned Universities in the Southwest Nigeria with 2007/2008 students enrolment as the base year and here are five Federal Universities and eight state universities in the Southwest geo-political zone of Nigeria.

### **The Study Sample and Sampling Technique**

Three Federal universities out of the four were purposively selected, that is University of Lagos (UNILAG), University of Ibadan (UI) and Obafemi Awolowo University (OAU). Similarly, three State Universities were purposively selected vis: Lagos State University (LASU), Olabisi Onabanjo University (OOU) and Adekunle Ajasin University (AAUA). These Universities that were purposively selected by the researchers are adduced to possess the expected variables to be investigated in the study. From each of the Universities, between 300 and 450 students were sampled after stratification in faculties and gender. In all, 2300 undergraduates who cut across eight faculties in each of the sampled universities constituted the respondents to the research instrument.

### **Instrumentation**

In carrying out this research work, two instruments were used. The first on sources of a university's funds and expenditure. This is referred to as

University Education Social Unit Cost Questionnaire (UESUCQ) this instrument is meant to collect secondary data and valid from the appropriated and audited accounts of the State and Federal Governments. The second instrument is named University Education Private Unit Cost Questionnaire. (UEPUCQ). this instrument collected primary data from the students concerned validated and found reliable at  $r = 0.92$ .

## Results

### Scoring and Treatment of Cost

UESUCQ = f (Personnel Cost (PC) + Overhead Cost (OC) + Capital Cost (CC)

$$\text{UESUCQ} = \frac{\text{PC} + \text{OC} + \text{CC}_{yt}}{\text{Ent}} \quad \text{or} \quad \sum_{t=1}^n \text{U}_{suc}$$

UESUCQ = University Education Social Unit Cost Questionnaire

Where: PC = Personnel Cost

OC = Overhead Cost

CC = Capital Cost

yt = Years involved (2007-2012)

Ent = Enrolment per year involved

$\sum$  = Summation of costs

U<sub>suc</sub> = University student unit cost

t=1 = Years involved/years of study (1-6years)

Where: UEPUCQ = University Education Private Unit Questionnaire

UEPUCQ = (Books/stationaries + Transportation + Feeding + Clothing + Levies + Consumables)

$$\text{UEPUCQ} = \frac{f(x_1 + x_2 + x_3 + x_4 + x_5 + x_6 + yt)}{\text{Or}} = \sum_{t=1}^n \frac{n}{\text{PUC}}$$

Where X<sub>1</sub> = books/stationery ; X<sub>2</sub> = transportation; X<sub>3</sub> = feeding

X<sub>4</sub> = clothing; X<sub>5</sub> = Levies; X<sub>6</sub> = Consumables

n = number of period involved; yt = years of study

$\sum$  = summation

PUC = Direct Private Unit Cost

**SUC= Social Unit Cost; PUC= Private Unit Cost; Naira = ₦**

### Research Question 1

Was there any difference between the Social Unit Cost of educating



the male and female undergraduates at the public universities South-West Nigeria from 2007 to 2012?

Table 1 Average Adjusted Direct Social Unit Cost of Undergraduates in South-West Nigeria from 2007 to 2012

University	Social Cost (Male)	S U C ₦	%	Social Cost (Female)	S U C ₦	%
AAUA	1,647,909,856	1,654,435.54	61.4	1,035,982,417	1,602,097.67	38.6
LASU	3,422,216,835	449,404.71	56.03	2,685,612,605	449,550.15	43.97
OAU	12,462,627,480	5,695,807.81	64.82	6,763,779,679	5,698,213.71	35.18
OOU	4,505,623,924	929,377.87	56.81	3,425,416,252	930,314.03	43.19
UI	9,764,137,274	2,163,558.00	51.08	9,351,245,016	2,163,638.37	48.92
UNILAG	15,246,755,760	3,702,466.19	48.33	16,300,431,820	3,703,801.82	51.62
<b>Average</b>	<b>7,841,545,188</b>	<b>2,442,508.35</b>	<b>56.41</b>	<b>6,593,744,632</b>	<b>2,424,602.63</b>	<b>43.59</b>

Source: Fieldwork

The adjusted cost as reveal in table 1 followed the same trend with that of the crude cost with the highest S U C of ₦3,816,191.23 from Obafemi Awolowo University (male) and ₦3,817,803.19 (female). The average reveals that the males took the highest social cost of ₦5,253,835,276 and S U C of ₦1,629,780.60 as against ₦1,624,483.76 by the female.

## Research Question 2

Was there any difference in the Private Unit Cost of areas of specialization/discipline among the undergraduates in public universities in South-West Nigeria from 2007 to 2012?

Table 2 Average Crude Direct Private Unit Cost of Undergraduates by Faculties in South-West Nigeria from 2007 to 2012

COST	AAUA	LASU	OAU	OOU	UI	UNILAG
	₦	₦	₦	₦	₦	₦
Arts	103,870.00	138,250.00	86,870.00	123,925.00	134,060.00	103,870.00
Adm./Mgt	111,869.00	156,790.00	69,760.00	134,325.00	182,020.00	110,700.00
Education	96,700.00	131,390.00	76,700.00	114,045.00	91,110.00	164,270.00
Engineering	136,360.00	125,350.00	91,180.00	130,855.00	117,840.00	179,670.00
Law	102,770.00	129,420.00	156,510.00	176,090.00	118,980.00	181,130.00
Medicine	136,360.00	218,385.04	380,540.00	395,879.82	268,314.25	221,726.87
Science	136,360.00	125,350.00	91,180.00	130,855.00	117,840.00	179,670.00
Social Sci.	88,970.00	127,030.00	101,700.00	108,035.00	101,150.00	165,930.00
<b>Average</b>	<b>106,756.50</b>	<b>137,608.57</b>	<b>146,659.29</b>	<b>169,022.12</b>	<b>144,782.06</b>	<b>161,042.41</b>

Source: Fieldwork

From table 2, Private Unit Cost in faculty by faculty pattern reveals that, Faculty of Arts, Lagos State University had highest with ₦138,250, while Obafemi Awolowo University had least with ₦86,870. Faculty of

Administration/Management of University of Ibadan had highest with ₦182,020 while Obafemi Awolowo University had the least with ₦69,760. In the Faculty of education, University of Ibadan had the least Average Direct Private Unit Cost of undergraduates with ₦76,700 while University of Lagos had ₦164,270 as the highest. From the faculty of engineering, University of Lagos, had the highest value with ₦179,670 while Obafemi Awolowo recorded the least with ₦91,180.00. Faculty of Law from University was recorded the highest value of ₦181,130 while the least came from Adekunle Ajasin University ₦102,770. Olabisi Onabanjo University recorded the highest amount in the faculty of medicine while Adekunle Ajasin recorded the least amount with ₦136,360. Faculty of science, University of Lagos had ₦179,670 as the highest while the least value came from Obafemi Awolowo University with ₦91,180. University of Lagos had the highest in social sciences ₦168,930 while Adekunle Ajasin had the least with ₦88,970. On the average, Private Unit Cost pattern reveals that undergraduates from Olabisi Onabanjo University spent ₦169,022.12 higher than others, followed by University of Lagos with ₦161,042.41. The least PUC was recorded in Adekunle Ajasin University with ₦106,756.50.

### Research Question 3

Was there any difference among the Social Unit Costs of areas of specialization/disciplines at the public university level in South West Nigeria from 2007 to 2012?

Table 3 Average Crude Direct Social Unit Cost (SUC) of Undergraduates by Faculties in South-West Nigeria from 2007 to 2012

COST	AAUA	LASU	OAU	OOU	UI	UNILAG
	₦	₦	₦	₦	₦	₦
Arts	1,660,668.34	449,646.74	5,697,001.70	929,867.23	2,164,448.56	3,702,516.20
Adm/Mgt	1,652,581.82	449,459.01	5,695,839.03	930,205.29	2,163,382.51	3,702,873.27
Educ.	1,651,626.01	449,849.05	5,696,323.69	930,480.55	2,164,189.61	3,704,375.22
Engineering	---	449,482.09	5,695,982.20	930,567.44	2,165,779.12	3,703,761.16
Law	1,646,933.90	449,062.70	5,696,695.59	930,318.21	2,163,733.74	3,703,422.33
Medicine	---	449,251.16	5,692,616.40	930,529.98	2,163,733.74	3,708,993.53
Science	1,658,794.53	449,391.24	5,696,488.37	930,055.91	2,163,023.44	3,706,543.91
Social Sc.	1,656,018.64	449,671.02	5,696,318.48	925,966.80	2,163,561.78	3,703,351.35
<b>Average</b>	<b>1,654,435.54</b>	<b>449,477.43</b>	<b>5,697,010.76</b>	<b>929,845.95</b>	<b>2,163,598.19</b>	<b>3,703,134.01</b>

Source: Fieldwork (2012)

From table 3 on the average, average Social Unit Cost across faculties reveal that Faculty of Medicine had the highest (₦2,589,335.30) followed by Engineering with ₦2,589,114.40. But the least Social Unit Cost

was recorded in the faculty of Law (₦2,431,694.41).

Table 4 Average Adjusted Direct Social Unit Cost (SUC) of Undergraduates by Faculties in South-West Nigeria from 2007 to 2012

COST	AAUA	LASU	OAU	OOU	UI	UNILAG
	₦	₦	₦	₦	₦	₦
Arts	1,112,641.09	301,263.32	3,816,991.14	623,011.04	1,450,180.55	2,480,685.85
Adm/Mgt	1,107,229.82	301,137.54	3,816,212.15	623,237.54	1,449,466.28	2,480,925.09
Educ.	1,106,589.43	301,398.86	3,816,536.87	623,421.97	1,450,007.04	2,481,931.40
Engineering	---	301,153.00	3,816,308.07	623,480.19	1,451,072.01	2,481,519.98
Law	1,103,445.71	300,872.01	3,816,786.05	623,313.20	1,449,701.61	2,481,292.96
Medicine	---	300,998.28	3,814,052.99	623,455.09	1,450,741.24	2,485,625.67
Science	1,111,392.34	301,092.13	3,816,647.21	623,137.46	1,449,225.71	2,483,384.42
Social Sc.	1,109,532.49	301,279.58	3,816,533.38	620,397.76	1,449,586.39	2,481,245.41
<b>Average</b>	<b>1,090,938.63</b>	<b>301,149.88</b>	<b>3,816,997.21</b>	<b>622,996.79</b>	<b>1,449,610.79</b>	<b>2,481,099.79</b>

Source: fieldwork

Table 4 shows the adjusted Social Unit Cost across faculties in all institutions. The expression of the crude Social Unit Cost transcend to the adjusted cost basket. This reveal that at AAUA the SUC at Faculty of Arts was > Science>Social Science> Adm./Mgt.> Education> Law. While in UNILAG faculty of Science ranked highest (₦ 2,483,384.42) while faculty of Arts ranked lowest. A cursory look at the average SUC, OAU ranked highest with ₦ 3,816,997.21, followed by UNILAG (₦ 2,481,099.79) and LASU with the least SUC of ₦ 301,149.88.

## Discussion

The study analyzed the unit costs of public university education in South West Nigeria from 2007 to 2012. It became obvious from data analysed that Social Unit Cost was higher than Private Unit Cost across all universities. Evidence revealed that Adekunle Ajasin University recorded ₦ 1,654,435.54 as average direct social unit cost, representing, 93.94% of its total cost of ₦ 1,761,190.54. The remnant of ₦ 106,755.00 went for Private Unit Cost, representing 6.06%. Lagos State University recorded the highest percentage of 23.06 in Private Unit Cost as against 76.94% of the total sum of ₦ 584,169.31. The least percentage of 2.37 was recorded by Obafemi Awolowo University on Private Unit Cost as against 97.63% for Social Unit Cost. This trend was corroborated by Ofem's (2011) finding in university education, Oyetakin's (2008) finding in secondary education and Akinyemi (2005) finding in primary education. This reveals that in Nigeria, at all levels of education irrespective of who benefits more, the Social Unit Cost has always been higher than the Private Unit Cost which denotes a huge financial

commitment by the government to all level of education as corroborated by Hincliffe (2002). In addition, Taubman and Wales (2012) from their research work, using data from various editions of the statistical abstract of the United States (U.S. Bureau of the Census) submitted that there was a significant difference between social unit cost and private unit cost of education.

The least PUC was recorded in Adekunle Ajasin University, Akungba with ₦106,756.50. On the other hand, in summary, average social unit cost across faculties reveal that Faculty of Medicine had the highest (₦2,589,335.30) followed by Engineering with ₦2,589,114.40. But the least Social Unit Cost was recorded in the faculty of Law with the value of ₦2,431,694.41.

This variation that existed in both the social and the private costs of university education, in all faculties in this study was also corroborated by UNESCO (2007), which opined that a higher percentage of 84 was borne by the public while 14% was expended by the household. Saruparia and Lodha (2013).

On social cost, University of Lagos expended the highest social cost of ₦15,246,755,760 on males followed by Obafemi Awolowo University with ₦12,462,627,480. But for females, ₦16,300,431,820 was recorded for University of Lagos followed by University of Ibadan with ₦9,351,245,016. Obafemi Awolowo University recorded the highest of ₦5,695,807.81 for male followed by University of Lagos with ₦3,702,466.19. This trend repeats itself for the female. This differential in gender cost of university education as revealed by the study was corroborated by Bratti, Naylor and Smith (2006) who also reported that there are cost differentials of male and female undergraduates. Also, Aina, Oyetakin and Oshun (2010) submitted that the cost of educating university students in Nigeria varies as a result of gender, price of commodities and university location.

With the rate of inflation in the economy, this study reveals that unit cost of education has been on an increase over the years. This was confirmed by Assam (2013) in his study on determining the unit cost found out that unit cost of student does not remain the same as the successful students as compared to its enrolment, thus increase unit cost of student.

## Conclusion

A cursorily look at the findings of the study reveals that both Private Unit Cost and Social Unit Cost of undergraduate vary from one university to the other, whether State or Federal and among disciplines. It also varies among gender. In the area of wastages, difference also existed between Federal and State Universities in terms of cost. On direct Social Unit Cost, a significant difference existed between the adjusted direct Social Unit Cost

among State and Federal universities in South –West Nigeria from 2007 to 2012.

From these results, it could also be concluded that significant difference existed between State and Federal universities in terms of cost. This aligns with the study carried out by Ogundipe (2000) in which he submitted that unit cost of education was significantly different by ownership and type. In the final analysis, it can be concluded that average unit cost of university education varies according to the ownership of the university, discipline, and year of study.

### **Implication for Practice**

Policy makers in educational sector need reliable information on the average Private Unit Cost among universities (State and Federal) and among disciplines to enhance proper plan in terms of the amount of resources to allocate bearing in mind the population per course and gender. This study again has been able to show average Private Unit Cost and Social Unit Cost across the six universities sampled in South-West Nigeria in the years under review, thereby providing a framework for analysis the unit cost of university undergraduate in the sub-region in different universities and disciplines.

### **Recommendations**

Based on the findings of this research work, it is therefore recommended as follows.

1. There is a need for educating more Female students as the Social Unit Cost was high in most of the universities sampled. Increase in admission of more female students across faculties will reduce the average Social Unit Cost in universities where they are higher. Following from above, more opportunities will be created for potential female undergraduates in public universities, thereby increasing the literacy level among female folks in Nigeria.
2. The cost of education has been on increase over the year reviewed and as a result becoming more burdensome on the government. As a result of this and in order to pave ways for effectiveness and efficiency, business organizations should make it as a matter of urgency, part of their corporate social responsibility to assist governments (both at state and federal levels) in funding university education through grants and donations.
3. Planners in the field of education should also assess the cost-benefit analysis of university undergraduate education and encourage government at both state and federal to divert the hard-earned

resources on fields/courses that are of greater benefits to both individuals and the society at large.

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